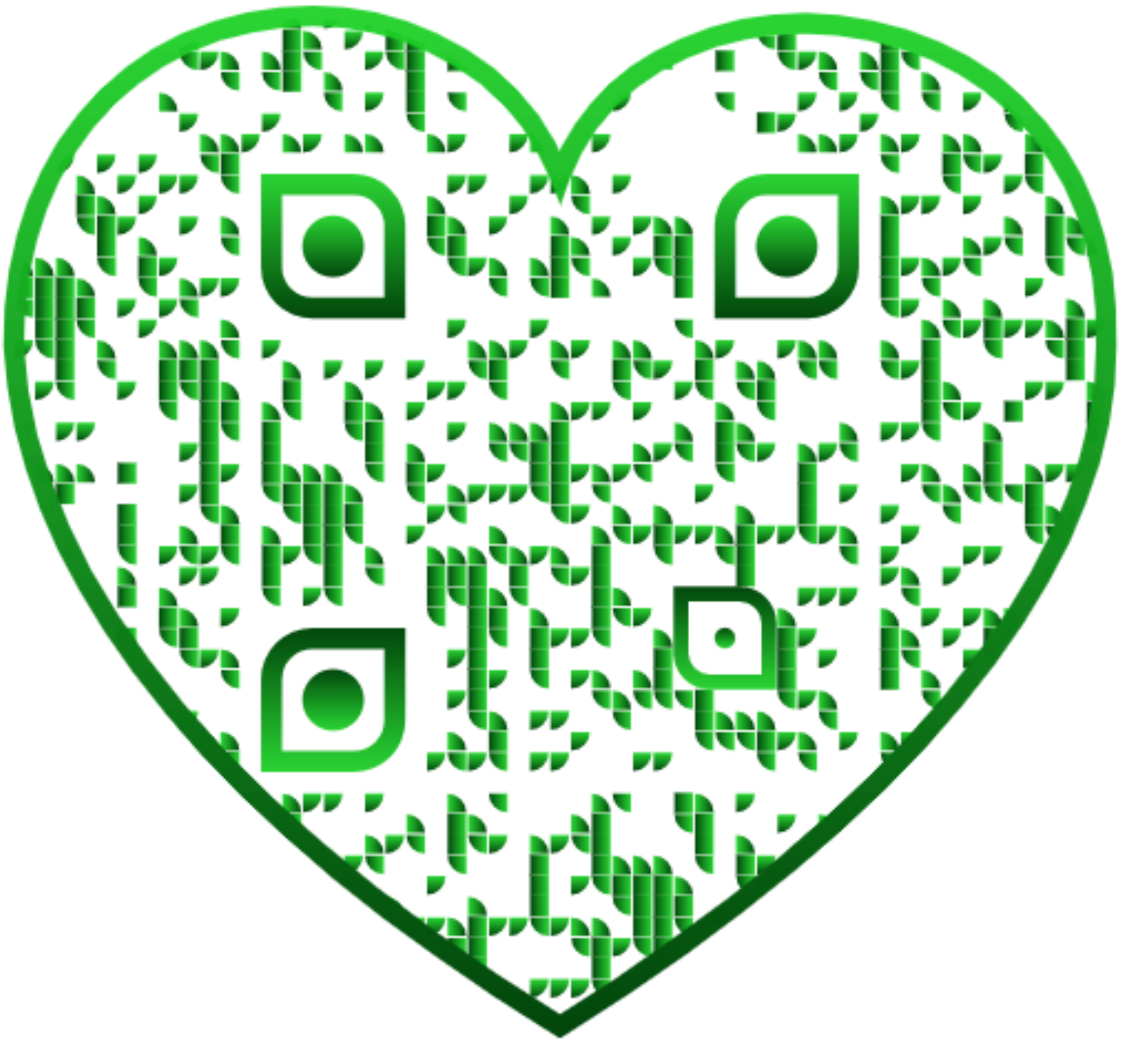
Optimizing The Management of Ulcerative colitis

Topic Review

Presented by:
Razan W. Areshyi
Pharm-D internship student at
Jazan University

Preceptor:
Dr. Omar Al-Sallami
Clinical Pharmacist
Deputy Manager of Clinical Pharmacy
Department - Internal Medicine



Outline

- Introduction
- Epidemiology
- Pathophysiology
- Risk Factors
- Clinical Presentation
- Diagnosis & Scores
- Management
- Complications
- Surgery indications
- Summary
- References

Brief Overview

Inflammatory Bowel Disease (IBD) is a group of chronic inflammatory conditions affecting the gastrointestinal (GI) tract.

The two main types are:

A. Crohn’s Disease (CD) — can affect any part of the GI tract
B. Ulcerative Colitis (UC) — limited to the colon and rectum

ACCP Updates in Therapeutics® 2024: Pharmacotherapy Preparatory Review and Recertification Course.
Rubin DT, et al. ACG Clinical Guideline: Ulcerative Colitis in Adults. Am J Gastroenterol. 2025.

Introduction

What is Ulcerative colitis (UC)?

A. Ulcerative colitis (UC) is a chronic idiopathic inflammatory bowel disease (IBD).

B. It primarily affects the colon and rectum, with continuous mucosal inflammation.

C. The disease course is relapsing and remitting.

D. The exact cause remains unknown, but it is likely multifactorial: genetic, immune dysregulation, and environmental factors.

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Epidemiology

Region / Study	Incidence (per 100,000/year)	Prevalence (per 100,000)	Notes
United States	6.3	~305	Peak onset: 20–30 years, second peak at 60–70
Europe	10–20	200–500	Same bimodal pattern
Asia	0.5–5	Increasing	Rapid rise in young adults
Saudi Arabia (Jeddah, 2020)	4.7	—	Median age at diagnosis: ~25 years
Saudi Arabia (Qassim, 2014)	6.3	—	Most patients aged 20–40

Table.1 UC Epidemiology – Global & Saudi

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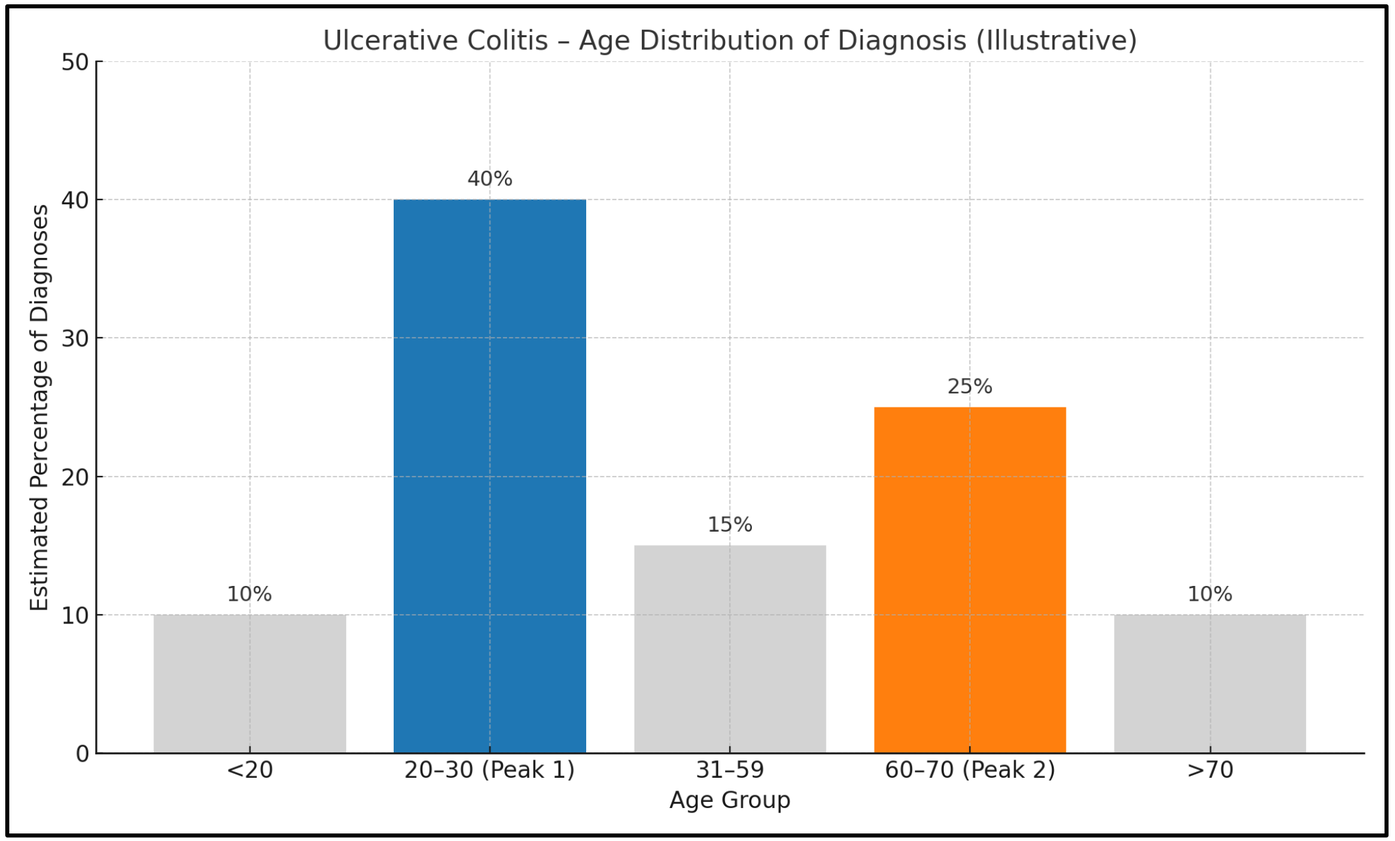
Epidemiology

Age-Specific Observations:



FigA. UC is most commonly diagnosed in people aged 20–30 years, with a second smaller peak in older adults (60–70 years). This pattern is seen globally and in Saudi patients

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Pathophysiology

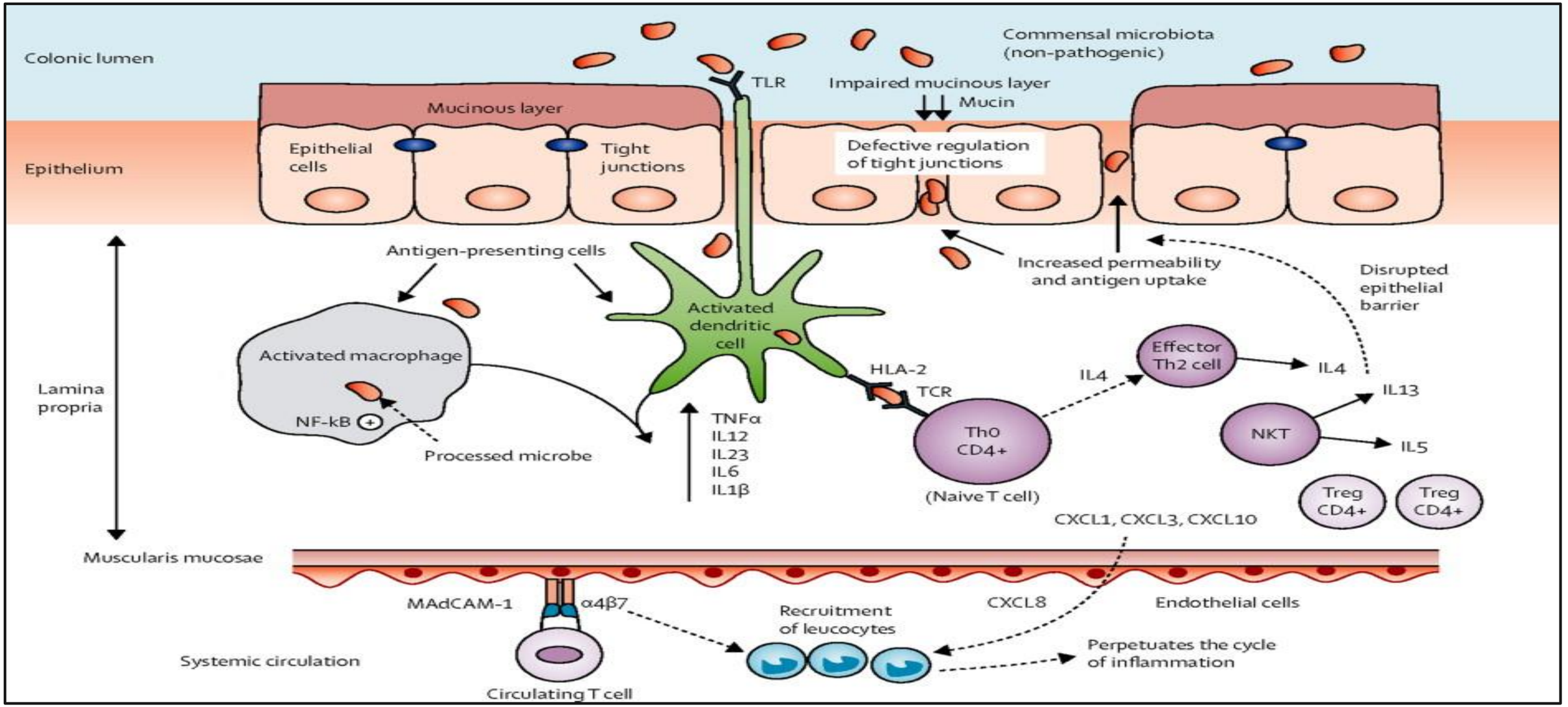

Fig B.

Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0

Pathophysiology

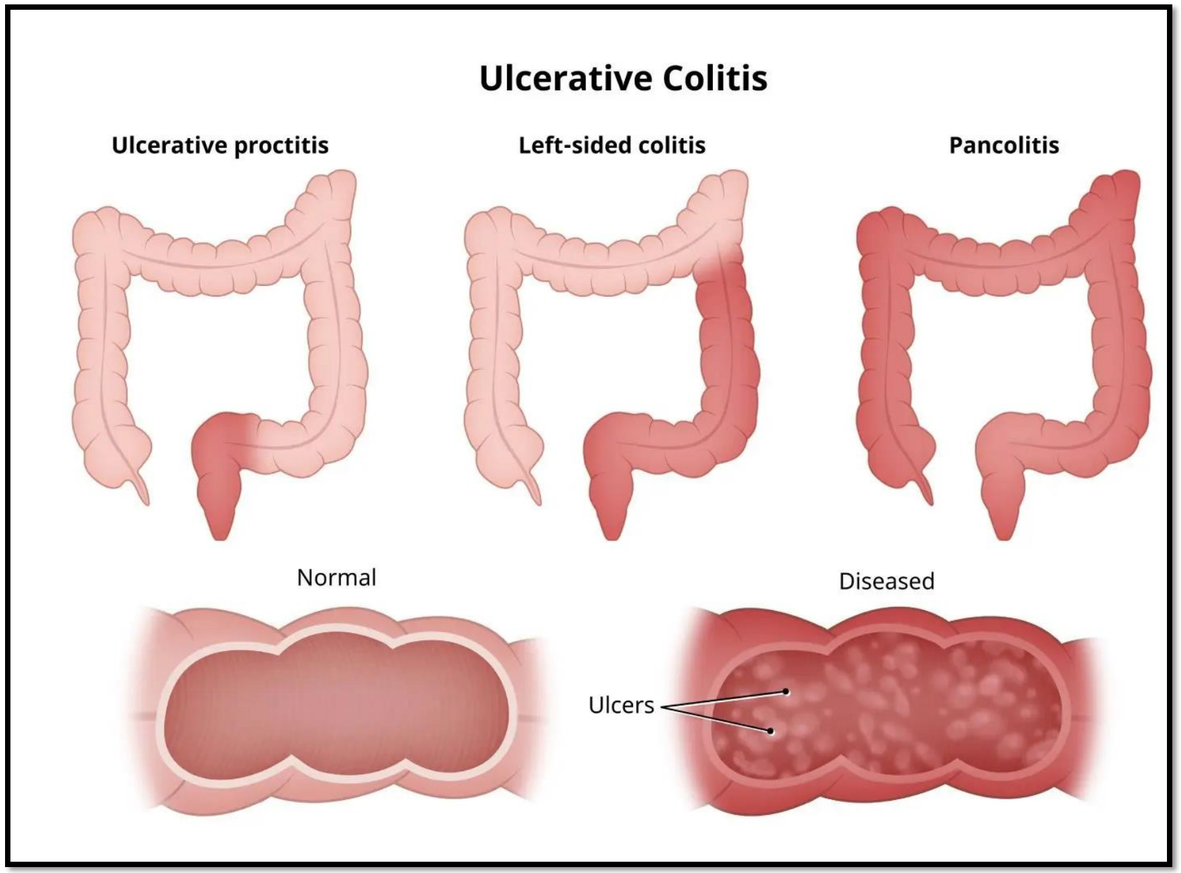

Fig C.

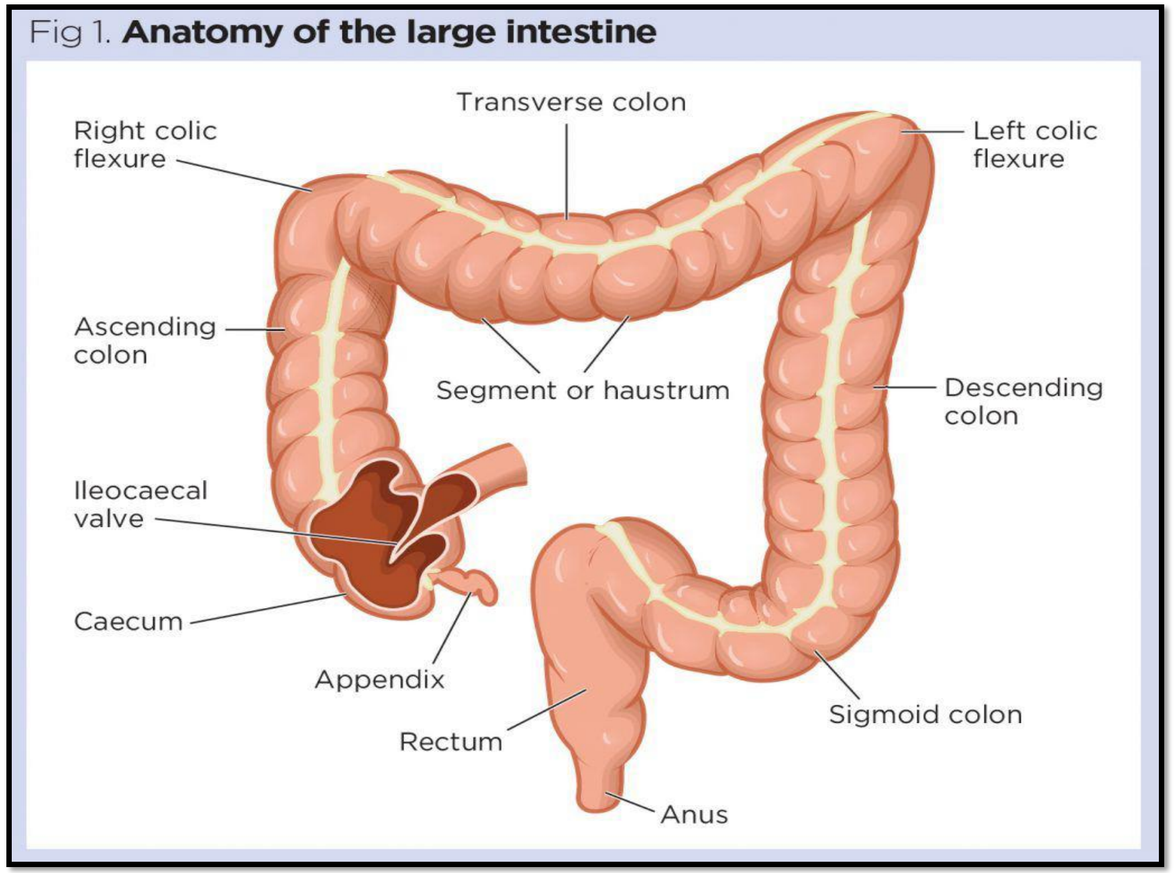

Fig D.

Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0

Risk Factors

- Genetic (Family history of Ulcerative)
- Immune Dysregulation
- Microbiome (Gut dysbiosis)
- Environmental (western diet, stress and pollutionu)
- Medications-Related (NSAIDS, Antibiotic)
- Smoking status (non smoker and ex smoker at higher risk)
- Geography (Developed/Urban regions)

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Clinical Presentation

- Diarrhea mixed with Bright Red Blood (Hematochezia)
- Mucus in Stool
- Urgency and Tenesmus
- Abdominal pain
- Fever
- Systmiac Sign (fatigue and Malaise, Weight loss)
- Extraintestinal manifestations (Arthritis, Uveitis, PSC, Anemia)

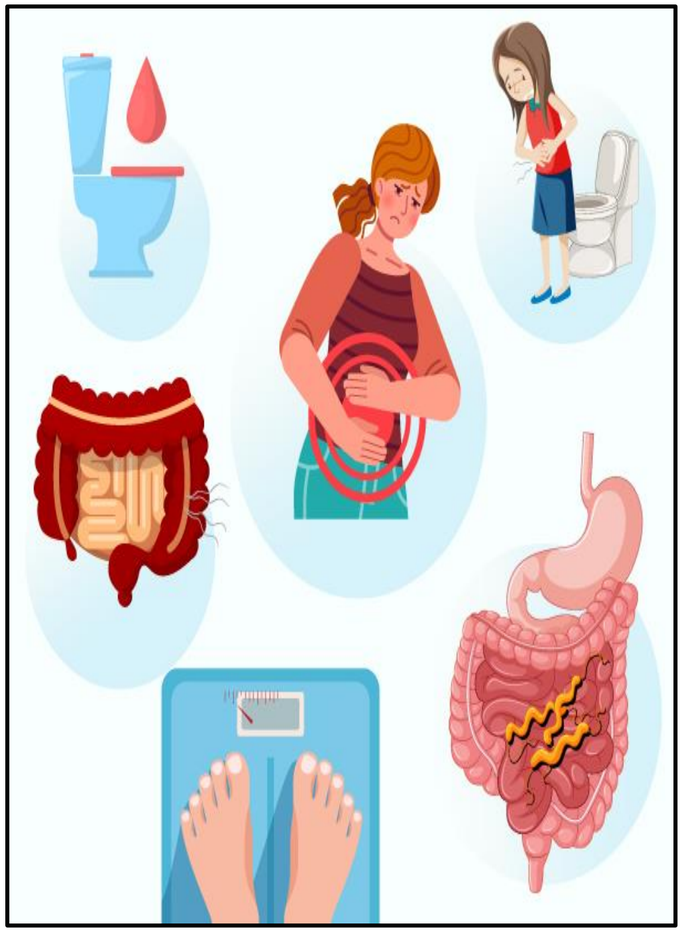

Fig G.

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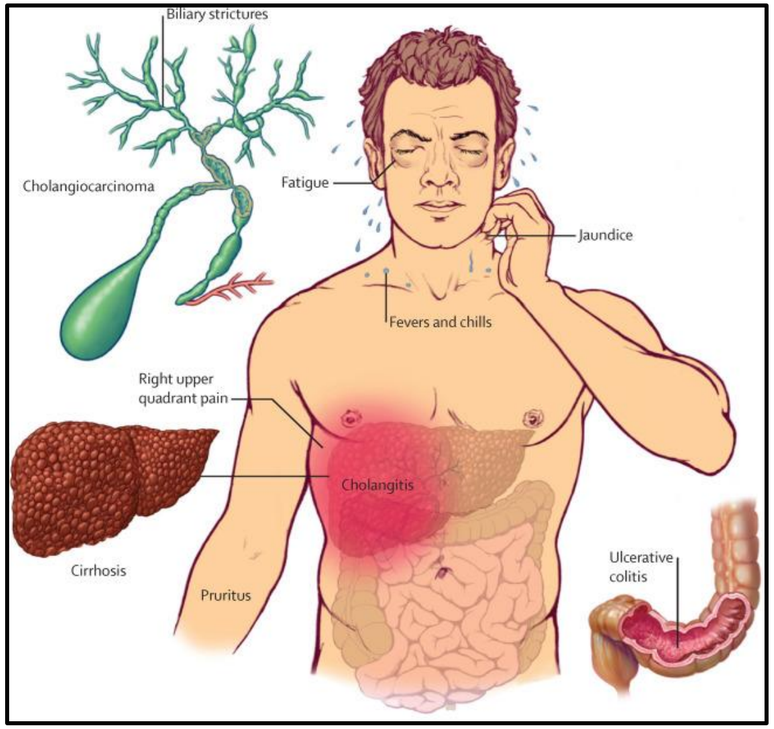

Fig F. Primary Sclerosing Cholangitis (PSC)

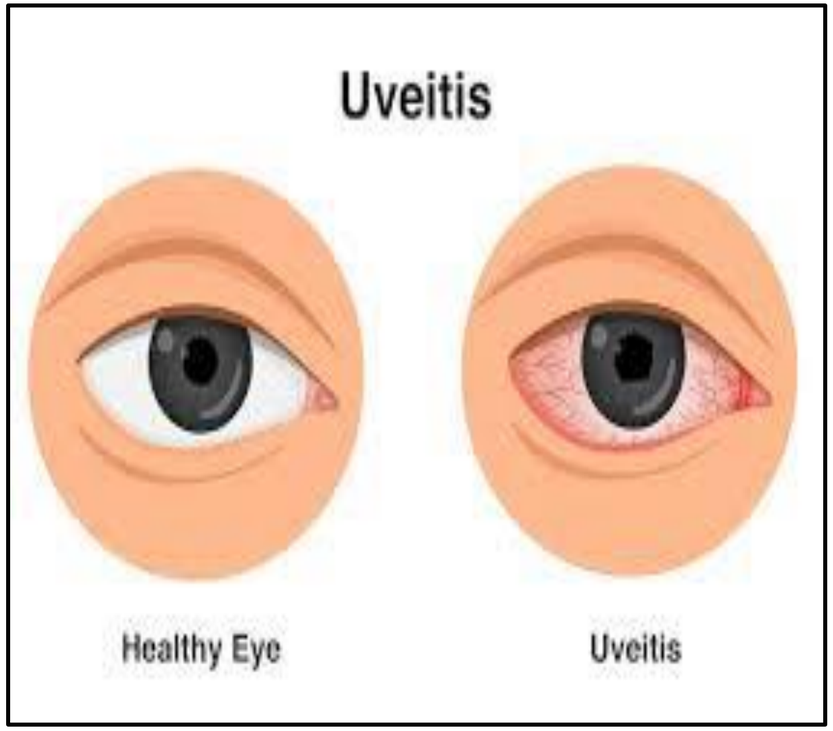

Fig H. Uveitis

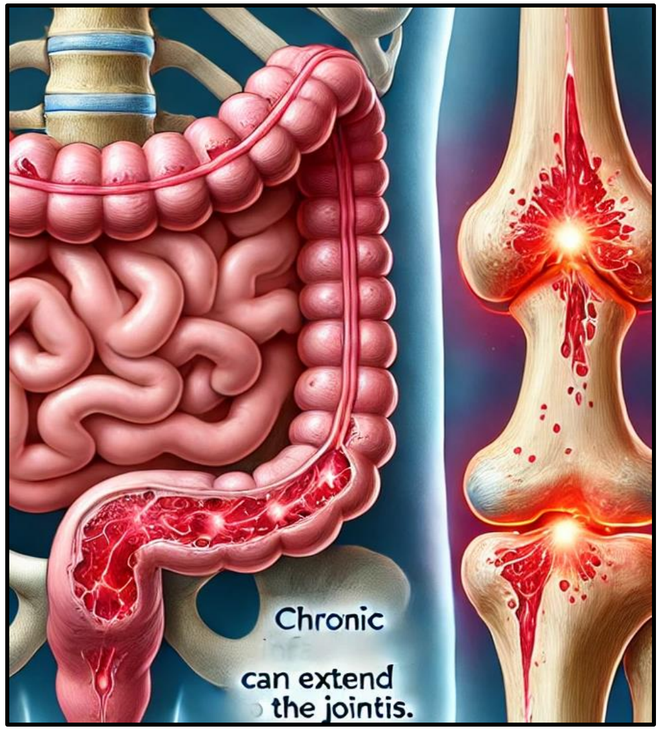

Fig I. Peripheral Arthritis

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Diagnosis

1. Clinical Evaluation

Chronic symptoms >4 weeks:

- Bloody diarrhea, urgency, tenesmus, abdominal pain
- Assess risk factors: family history, smoking, NSAID use

2. Rule Out Infections

Test	Target
Stool culture/PCR	Salmonella, Shigella, Campylobacter
C. difficile toxin	Clostridium difficile
Ova & parasites	If travel or high suspicion

Table.2

3. Labs & Biomarkers (Supportive, Not Diagnostic):

Marker	Interpretation
CRP, ESR ↑	Active inflammation
Fecal calprotectin	>150–200 suggests intestinal inflammation
Albumin ↓	Severe disease
ANCA+	Found in ~60–70% of UC cases (pANCA)

Table.3

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Diagnosis

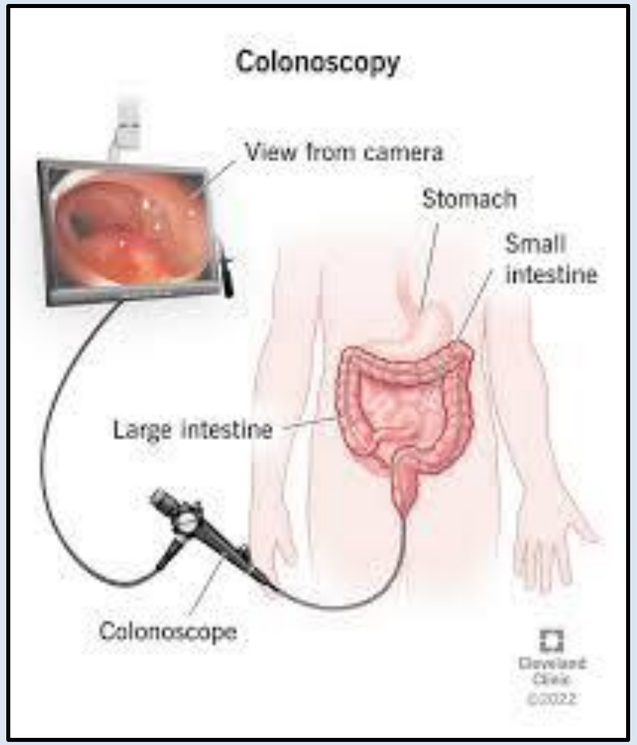

Fig.J.

4. Endoscopy with Biopsy – Gold Standard

Finding	Typical in UC
Continuous inflammation	Starts from rectum, extends proximally
Mucosal friability	Bleeds easily on contact
Superficial ulcerations	Erosions, loss of vascular pattern
Histology	Crypt abscesses, distortion, basal plasmacytosis

Table.4

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Diagnosis

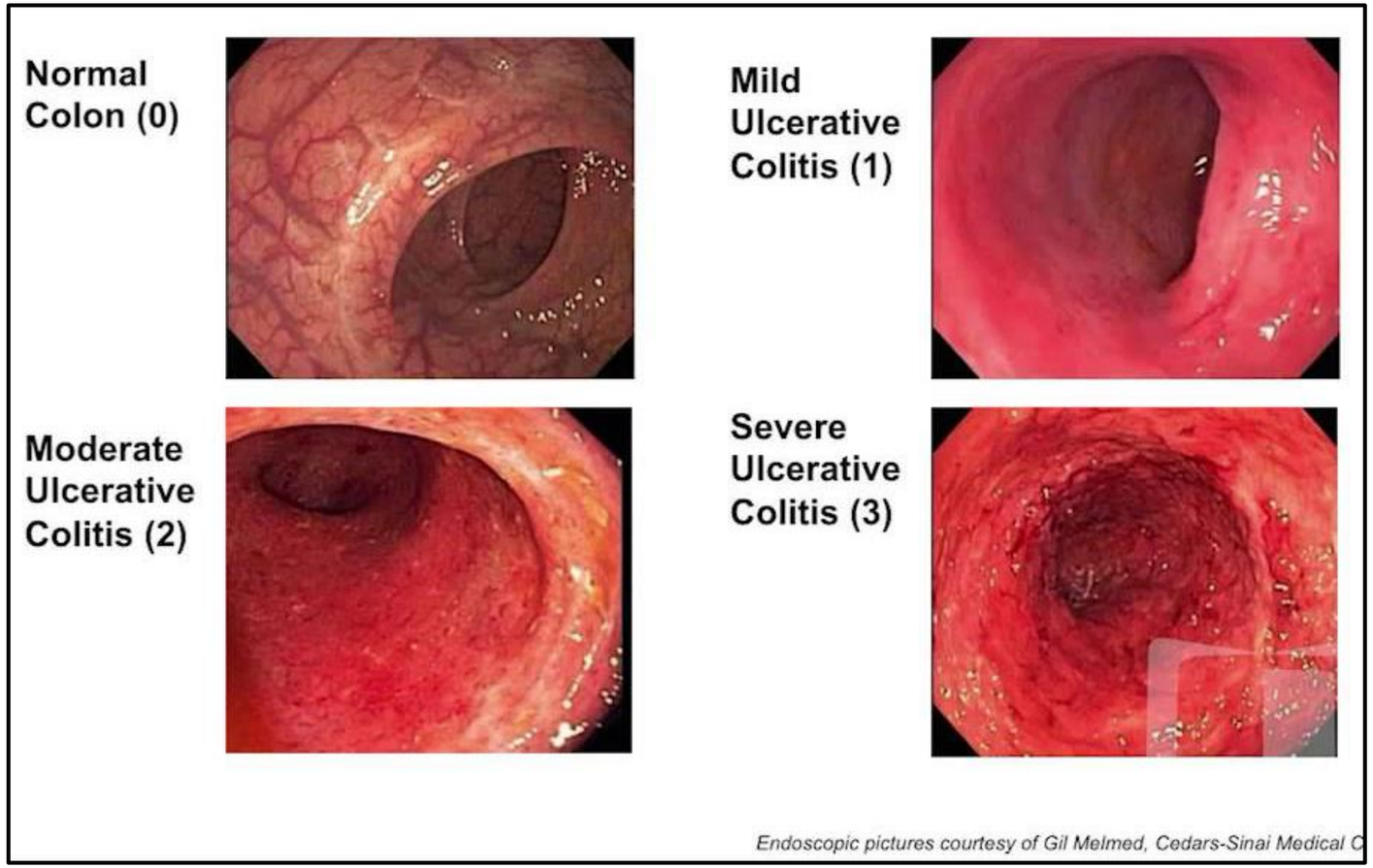
Normal Colon (0)
Mild Ulcerative Colitis (1)
Moderate Ulcerative Colitis (2)
Severe Ulcerative Colitis (3)
Endoscopic pictures courtesy of Gil Melmed, Cedars-Sinai Medical C

Fig k.

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Diagnosis

5. Disease Activity Indices (for severity grading):

Mayo Score (0–12)

UCEIS (0–8)

SCCAI (0–19)

US-BWT

used to:

- Evaluate disease severity
- Monitor response to treatment
- Support therapeutic decisions
- Track mucosal and clinical remission

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Mayo Score

Clinical + Endoscopic
Total Score Range: 0 to 12

- Used to assess disease activity and treatment response, especially in trials.
- Combines symptoms, endoscopic appearance, and physician assessment.
- Treatment Goal: Mayo score ≤2, with endoscopic subscore ≤1

Parameter	Score 0	Score 1	Score 2	Score 3
Stool frequency	Normal	1–2 stools above normal	3–4 stools above normal	≥5 stools above normal
Rectal bleeding	None	Small amount (traces)	Obvious blood	Blood alone, no stool
Endoscopic appearance	Normal mucosa	Mild erythema, loss of vascular pattern	Friability, small erosions	Large ulcers, spontaneous bleeding
Physician's global assessment	Normal	Mild disease	Moderate	Severe

- 0–2: Remission, 3–5: Mild disease, 6–10: Moderate disease, ≥11: Severe disease

Table.5

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UCEIS

Ulcerative Colitis Endoscopic Index of Severity)

Endoscopic only
Score Range: 0 to 8

- More precise than Mayo endoscopic subscore
- Used mainly in clinical trials and assessing mucosal healing
- Used to guide biological or advanced therapy decisions.

Feature	Score 0	Score 1	Score 2	Score 3
Vascular pattern	Normal	Patchy obliteration	Obliterated	—
Bleeding	None	Mucosal bleeding	Luminal mild	Luminal (moderate or severe)
Erosions/ulcers	None	erosions	Superficial ulcer	Deep ulcers

0–1: Normal to mild activity, 2–4: Moderate activity, ≥5: Severe activity

Table.6

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SCCAI

Simple Clinical Colitis Activity Index

Symptom-based (Clinical only)

Score Range: 0 to 19

- Simple, used in outpatient and self-assessment settings
- Quick tool for monitoring flares and adjusting treatment in follow-up visits.

Symptom	Score 0	Score 1	Score 2	Score 3	Score 4
Bowel Frequency (Day)	1–3 times/day	4–6 times/day	7–9 times/day	9+ times/day	—
Bowel Frequency (Night)	0 times/night	1–3 times/night	4–6 times/night	—	—
Urgency of Defecation	None	Hurry	Immediately	Incontinence	—
Blood in Stool	None	Trace	Occasionally frank	Usually frank	—
General Well-being	Very well	Slightly below par	Poor	Very poor	Terrible
Extra-colonic Features	—	1 point per feature	—	—	

<5: Clinical remission, 5–11: Mild to moderate disease, ≥12: Severe disease

Table.8

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US-BWT

Ultrasound Bowel Wall Thickness
Imaging (non-invasive)

- Assesses active inflammation using transabdominal ultrasound
- Helpful in pediatrics, pregnancy, and settings avoiding endoscopy
- Complements clinical and lab markers like CRP and fecal calprotectin

Wall Thickness	Interpretation
<3 mm	Normal
3–4 mm	Likely mild inflammation
>4 mm	Moderate to severe activity

Table.9

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Treatment

- ❑ Goals
- ❑ Suggested **management** algorithm

Goals of treatment

Sustained clinical and endoscopic remission

= No symptoms + Mucosal healing on endoscopy

Clinical symptoms : ≤3 stools/day, no blood, no urgency, Endoscopy: Mayo endoscopic subscore 0–1, Fecal calprotectin: <150 µg/g (ideally <100), CRP :Normalized, No steroid dependence: Able to taper off steroids fully

Induction therapy

Rapid symptom control and reduce inflammation

Maintenance therapy

Prevent relapse, maintain remission

Long-term : Avoid complications, reduce hospitalizations, improve quality of life

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Pharmacological Options for Induction, Maintenance, and Treatment Failure in Ulcerative Colitis

1. Aminosalicylates (5-ASA)

Use: **First-line in mild to moderate** UC (sometimes CD); for induction and maintenance of remission.

- **Sulfasalazine (Azulfidine):**
  - Cleaved in the colon into active 5-ASA and inactive sulfapyridine.
  - Best for colonic disease.

  Adverse effects:
    - Dose-related: GI upset, headache, arthralgia, folate deficiency.
    - Idiosyncratic: rash, fever, liver toxicity, bone marrow suppression, infertility in men.
  - **Contraindicated in sulfa allergy.**
  - **Dose:** 3–4 g/day (start low: 500–1000 mg 1–2x/day).
- **Non-sulfa 5-ASA (Mesalamine-based):**
  - Better tolerated than sulfasalazine.
  - Product selection depends on disease location (Table)
  - **((Rare: nephrotoxicity with long-term 5-ASA use))**

Drug	Dose	Site of Action	Notes
Sulfasalazine	3–4 g/day (start with 500–1000 mg 1–2x/day)	Colon	Avoid in sulfa allergy; GI, rash, ↓ sperm
Mesalamine (Pentasa)	2–4 g/day	Small bowel + colon	Controlled-release
Mesalamine (Lialda)	2.4–4.8 g once daily	Colon	MMX formulation
Mesalamine (Delzicol / Asacol HD)	1.6–4.8 g/day	Distal ileum + colon	Delayed-release
Mesalamine (Apriso)	0.375–1.5 g/day	Colon	Extended-release
Mesalamine (Rowasa)	4 g enema daily	Rectum + sigmoid	Topical for distal disease
Mesalamine (Canasa)	1 g suppository daily	Rectum	For proctitis
Olsalazine	1–3 g/day	Colon	May cause secretory diarrhea
Balsalazide	2–6.75 g/day	Colon	Prodrug of mesalamine

Table.10

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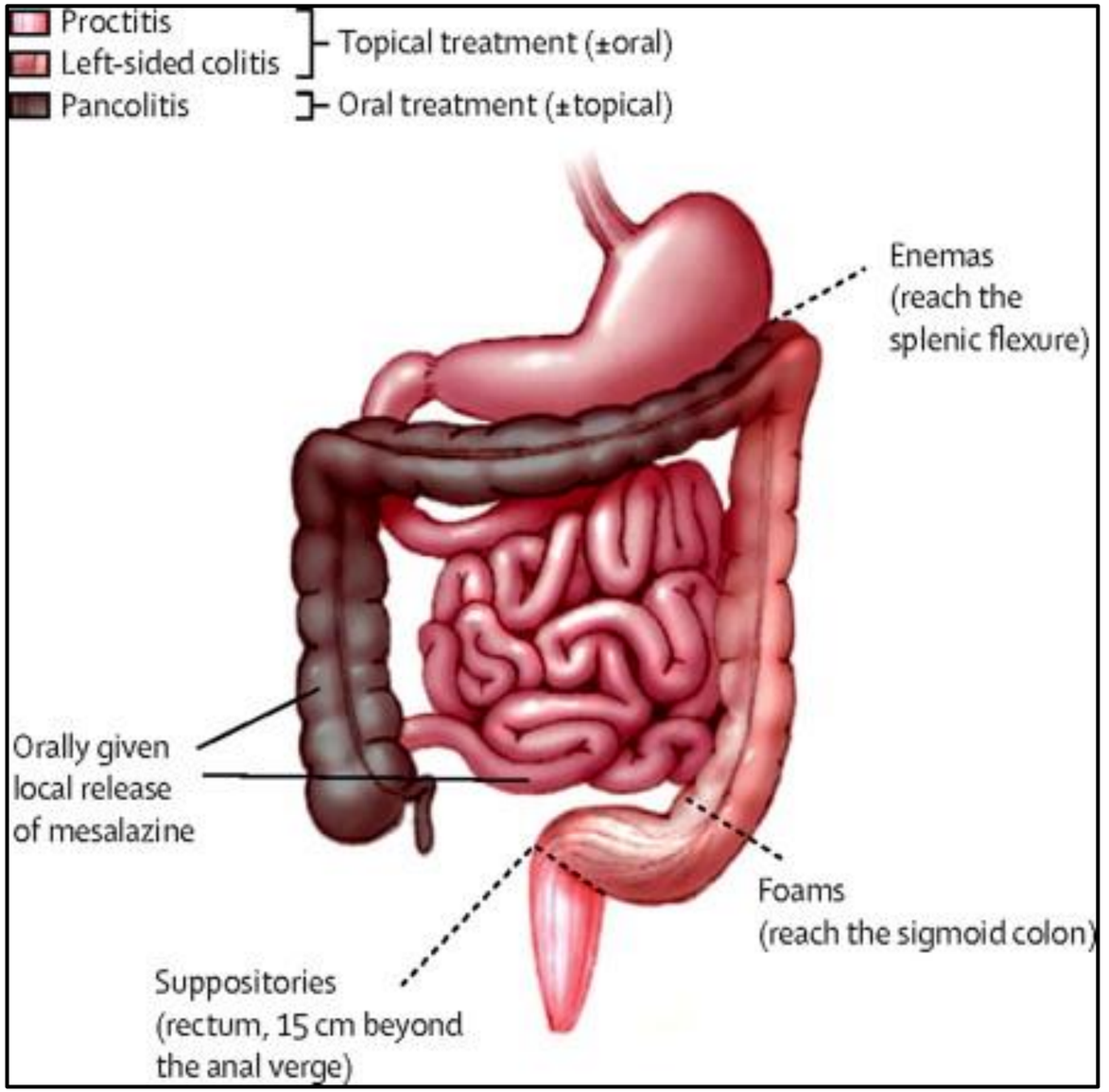

Fig L. Release of mesalazine preparation

2. Corticosteroids

Use: Induction of remission during **moderate-severe flares;** not for maintenance.

Systemic (Prednisone, Prednisolone):

Dose: 20–60 mg/day, taper ASAP.

Budesonide (Entocort EC, Ortikos – for CD; **Uceris – for UC):**

UC (Uceris): 9 mg/day × 8 wks.

Minimal systemic side effects due to high first-pass metabolism.

Rectal Steroids (for distal disease):

Hydrocortisone enema/foam/suppository (Cortenema, Cortifoam, Anucort): Used HS or BID.

Budesonide rectal foam (Uceris): 2 mg BID × 2 wks → QD × 4 wks.

Side effects: adrenal suppression, infections, osteoporosis, glucose intolerance.

Drug	Dose	Route	Notes
Prednisone / Prednisolone	20–60 mg/day → taper	Oral	For flares; not for maintenance
Budesonide (Entocort EC, Ortikos)	9 mg/day × 8 wks → 6 mg × 3 mo	Oral (CD)	High first-pass metabolism, minimal systemic effects
Budesonide (Uceris)	9 mg/day × 8 wks	Oral (UC)	Colon-targeted release
Hydrocortisone IV	100 mg q8h	IV	For severe flares
Methylprednisolone IV	15–48 mg/day	IV	Switch to oral ASAP
Hydrocortisone (Cortenema)	100 mg HS	Rectal	For distal UC
Hydrocortisone (Cortifoam)	90 mg/day	Rectal foam	BID
Budesonide foam (Uceris)	2 mg BID × 2 wks → QD × 4 wks	Rectal	For mild to moderate distal UC

Table.11

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3. Immunomodulators

Mercaptopurine Tablets IP 50 mg
6-MP®
SCHEDULE G PRESCRIPTION
DRUG – CAUTION
It is dangerous to take this preparation except under medical supervision.

Use: **Maintenance only** (delayed onset: 3–6 months), steroid-sparing effect.
Azathioprine (Imuran): 2–2.5 mg/kg/day PO
6-Mercaptopurine (Purinethol): 1–1.5 mg/kg/day PO
Methotrexate: 15–25 mg/week IM **(CD only)**

(not recommended as induction monotherapy)

Test TPMT enzyme before AZA/6-MP initiation.

Adverse effects:
AZA/6-MP: pancreatitis, bone marrow suppression, hepatotoxicity, lymphoma risk (↑ with TNFi).
Methotrexate: hepatotoxicity, pulmonary toxicity, folate deficiency.

Drug	Dose	Use	Notes
Azathioprine	2–2.5 mg/kg/day	Maintenance	Check TPMT before starting
6-Mercaptopurine	1–1.5 mg/kg/day	Maintenance	Monitor CBC, LFTs
Methotrexate	15–25 mg/week IM	CD only	Supplement folate; hepatotoxicity risk

Table.12

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4. Small Molecules – JAK Inhibitors

Use: **Moderate-severe UC** after failure of TNFi.

Tofacitinib (Xeljanz):

- **Induction:** 10 mg BID (IR) or 22 mg QD (ER) × 8–16 wks.
- **Maintenance:** 5–10 mg BID or 11 mg QD (ER).
- Remission rate: ~18–34% (OCTAVE trials).

Upadacitinib (Rinvoq):

- **Induction:** 45 mg QD × 8–12 wks.
- **Maintenance:** 15–30 mg QD.
- Remission: 26–52% (U-ACHIEVE trials).

Side effects: infections (TB, herpes zoster), malignancy, thrombosis, anemia, ↑CV risk.

Drug	Induction Dose	Maintenance Dose	Notes
Tofacitinib (Xeljanz)	IR: 10 mg BID × 8–16 wksER: 22 mg QD × 8–16 wks	IR: 5–10 mg BIDER: 11 mg QD	Screen TB/HBV; ↑ CV/thrombosis risk
Upadacitinib (Rinvoq)	45 mg QD × 8 wks (UC)12 wks (CD)	15–30 mg QD	Adjust in renal/hepatic impairment

Table.13

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5. S1P Receptor Modulator

Ozanimod (Zeposia):

Use: **Moderate to severe UC.**

Titration: 0.23 → 0.46 → 0.92 mg QD.

Remission (True North trial): ~18% at week 10.

Monitor before use: CBC, EKG, LFTs, varicella immunity.

CI: recent cardiac events, heart block, MAO inhibitors, severe sleep apnea.

ZEPOSIA
(ozanimod) capsules
STARTER KIT
7-DAY
STARTER PACK
NOT TO BE SOLD SEPARATELY
STEP 1: (Days 1-7)
Complete the dosing inside this 7-Day Pack before starting Step 2.
This pack contains 7 capsules for dosing over 7 days. The contents of this pack are as follows:
Four 0.23 mg capsules
Three 0.46 mg capsules
7 CAPSULES
STEP 1: (Days 1-7)
Starting at Day 1, complete the 7-Day Starter Pack
Days 1-4: Take one 0.23 mg capsule orally once daily
Days 5-7: Take one 0.46 mg capsule orally once daily
STEP 2: (Day 8 and thereafter)
After completing the 7-Day Starter Pack, begin taking one 0.92 mg capsule a day orally from the 30-count bottle.
Dispense the accompanying Medication Guide to each patient.
Rx only

Drug	Dose	Use	Notes
Ozanimod (Zeposia)	0.23 mg QD × 4 d → 0.46 mg × 3 d → 0.92 mg QD (maintenance)	Moderate to severe UC	Screen ECG, CBC, LFTs, VZV immunity

Table.14

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6. Biologics

Used in **moderate-severe** IBD (especially after failure of other agents).

A. TNF-alpha Inhibitors:

Drug	Induction Dose	Maintenance Dose	Notes
Infliximab (Remicade)	5 mg/kg IV at 0, 2, 6 wks	Q8 wks	Trough >3–7 mcg/mL
Adalimumab (Humira)	160 mg (day 1), 80 mg (day 15)	40 mg Q2wks	Trough >5–7 mcg/mL
Certolizumab (Cimzia)	400 mg at 0, 2, 4 wks	400 mg Q4wks	CD only
Golimumab (Simponi)	200 mg (wk 0), 100 mg (wk 2)	100 mg Q4wks	UC only

Table.15

Risks: serious infections (TB), malignancy (esp. lymphoma), heart failure, infusion reactions, autoimmune hepatitis, cytopenias.

NDC 57894-070-01
FOR SUBCUTANEOUS INJECTION
Sterile solution in a single dose prefilled syringe. Discard unused portion.
See package insert for dosing information.
No U.S. standard of potency.
This Product Contains Dry Natural Rubber.
Rx only.
Simponi®
golimumab
50 mg / 0.5 mL
One single dose prefilled syringe

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Mosli MH, et al. Jeddah experience. Saudi J Gastroenterol. 2020., Alharbi OR, et al. Qassim region. Saudi Med J. 2014.

6. Biologics

B. Integrin Inhibitors:

Drug	Dose	Use	Notes
Natalizumab (Tysabri)	300 mg IV Q4wks	CD	TOUCH program, JC virus screening
Vedolizumab (Entyvio)	300 mg IV at 0, 2, 6 wks → Q8wks	UC/CD	More gut-selective, safer than natalizumab

Table.16

C. IL-12/23 Inhibitor – Ustekinumab (Stelara):

Drug	Induction (IV)	Maintenance (SC)	Notes
Ustekinumab (Stelara)	Weight-based:260 mg (<55 kg)390 mg (55–85 kg)520 mg (>85 kg)	90 mg Q8wks	UC and CD

Table.17

One time IV Infusion Induction Dose

Subcutaneous Injection Maintenance Dose

D. Anti-IL-23 – Risankizumab

Drug	Induction (IV)	Maintenance (SC)	Notes
Risankizumab (Skyrizi)	600 mg IV at 0, 4, 8 wks	180 or 360 mg Q8wks	CD only; check LFTs, TB screen

Table.18

2 x 0.83 mL prefilled syringes
NDC 0074-2042-02
Skyrizi™
risankizumab-rzaa
Injection
75 mg/0.83 mL per Syringe
FOR SUBCUTANEOUS USE ONLY
FOR A 150 MG DOSE, TWO 75 MG SYRINGES ARE REQUIRED, INJECT ONE SYRINGE AFTER THE OTHER
ATTENTION PHARMACIST:
Each patient is required to receive the enclosed Medication Guide.
The entire carton is to be dispensed as a unit.
Return to pharmacy if syringe tray seal is broken or missing.
Rx only
www.SKYRIZI.com
TO OPEN
abbvie

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Medical management of IBD: adjunctive therapies

- Caution in active disease; reduction in motility may precipitate toxic megacolon

1. **Loperamide (Imodium)** can be useful for proctitis or diarrhea; 2 mg after each loose stool (16 mg/day Maximum)

2.. Antispasmodics (recommended for short-term use, associated with anticholinergic adverse effects)

a. Dicyclomine (Bentyl), 10–40 mg orally four times daily
b. Hyoscyamine (Levsin), 0.125–0.25 mg orally/slow release every 4 hours as needed

3. Cholestyramine (Questran): for bile salt–induced diarrhea after ileal resection

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Pharmacological Options for Induction, Maintenance, and Treatment Failure in Ulcerative Colitis

Drug Class	Example Drugs	Mechanism of Action	Dose	Common Side Effects	Interactions	Pregnancy & Lactation
5-ASA (Aminosalicylates)	Mesalamine, Sulfasalazine	Anti-inflammatory via prostaglandin & leukotriene inhibition	Oral ≥2g/day; Rectal (supp/enema) 1g/day	Headache, nausea, rash, nephrotoxicity	Sulfasalazine interacts with folate	Safe in pregnancy (Category B); Sulfasalazine requires folic acid
Corticosteroids	Prednisone, Budesonide MMX	Suppress immune response and inflammation	Prednisone: 40–60 mg/day; Budesonide MMX: 9 mg/day	Hyperglycemia, osteoporosis, mood swings, fluid retention	Caution with NSAIDs, antidiabetics	Budesonide preferred (minimal systemic absorption); acceptable short-term
Anti-TNF	Infliximab, Adalimumab, Golimumab	Bind and neutralize TNF-α	Infliximab: 5 mg/kg IV; Adalimumab: 160/80/40 mg SC; Golimumab: SC monthly	Infections (TB, fungal), infusion reactions	Immunosuppressants (↑ risk of infections)	Generally safe; infliximab can cross placenta in late pregnancy
Anti-Integrin	Vedolizumab	Blocks gut-selective α4β7 integrin → prevents leukocyte migration	300 mg IV @ 0, 2, 6 weeks then q8 weeks	Headache, mild infections	Minimal systemic interaction	Considered safe; limited placental transfer
IL-12 & IL-23 inhibitors	Ustekinumab, Guselkumab, Risankizumab, Mirikizumab	Inhibit proinflammatory IL pathways	Ustekinumab: IV loading → SC 90mg q8w; others SC	URTI, headache, rarely malignancy	Avoid combining with strong immunosuppressants	Limited data; used if benefit outweighs risk (especially Ustekinumab)
JAK inhibitors	Tofacitinib, Upadacitinib	Inhibit JAK-STAT pathway to reduce cytokine signaling	Tofacitinib: 10→5 mg BID; Upadacitinib: 45→15 mg daily	Infections, blood clots, ↑ lipids, malignancy	Strong CYP3A4 inhibitors/inducers	Contraindicated in pregnancy and breastfeeding
S1P Modulators	Ozanimod, Etrasimod	Trap lymphocytes in lymph nodes → ↓ gut inflammation	Ozanimod: 0.92 mg/day after titration	Bradycardia (initiation), ↑ LFTs, infections	Avoid with strong immunosuppressants & cardio meds	Avoid in pregnancy & lactation (teratogenic potential)
Thiopurines	Azathioprine, Mercaptopurine	Purine analogs → inhibit T/B lymphocyte proliferation	AZA: 2–2.5 mg/kg/day	Myelosuppression, hepatotoxicity, pancreatitis, malignancy	Allopurinol ↑ toxicity, live vaccines contraindicated	Can be used if benefit outweighs risk (monitor baby's CBC)
antimetabolites	Methotrexate	Dihydrofolate reductase inhibitor → ↓ DNA synthesis	15–25 mg weekly	Hepatotoxicity, bone marrow suppression, stomatitis	NSAIDs, penicillin ↑ MTX levels	Teratogenic – contraindicated in pregnancy & breastfeeding

Table.2 Pharmacological options

Table.19

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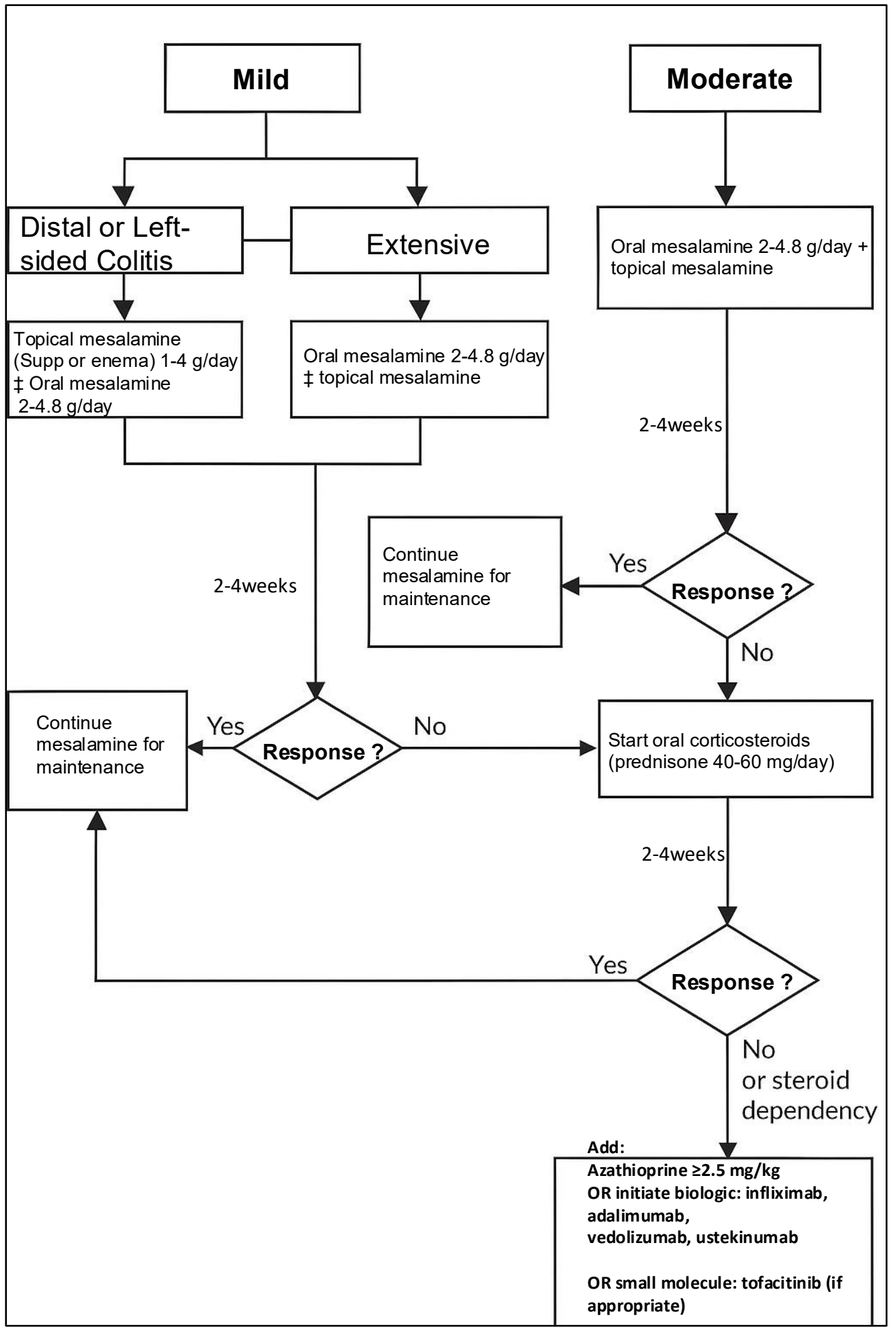
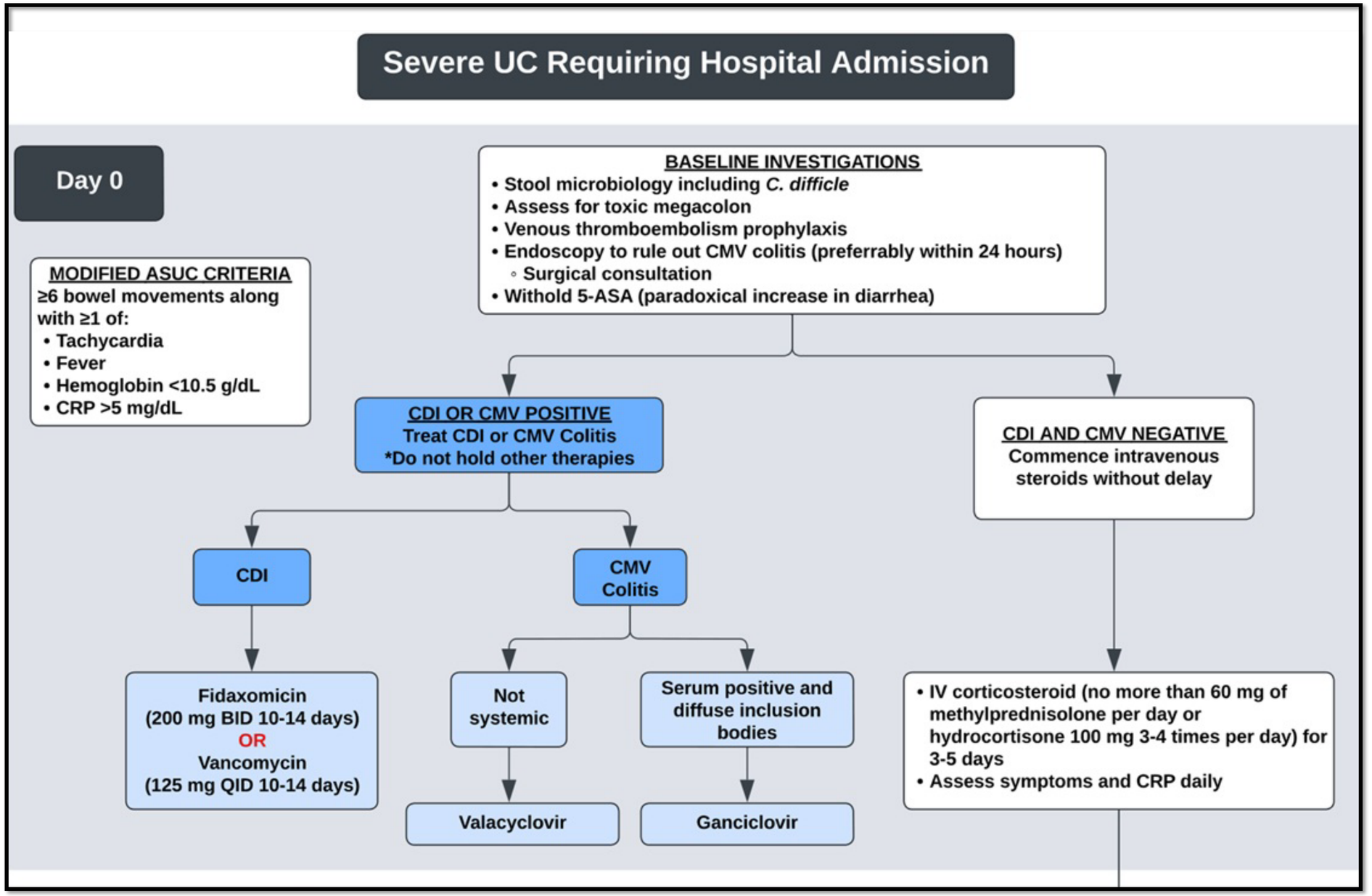
Suggested Management Algorithm for Mild to moderate Ulcerative Colitis (UC)

Assess Disease Severity

Use clinical symptoms + endoscopy + biomarkers (Mayo Score, CRP, Fecal calprotectin)

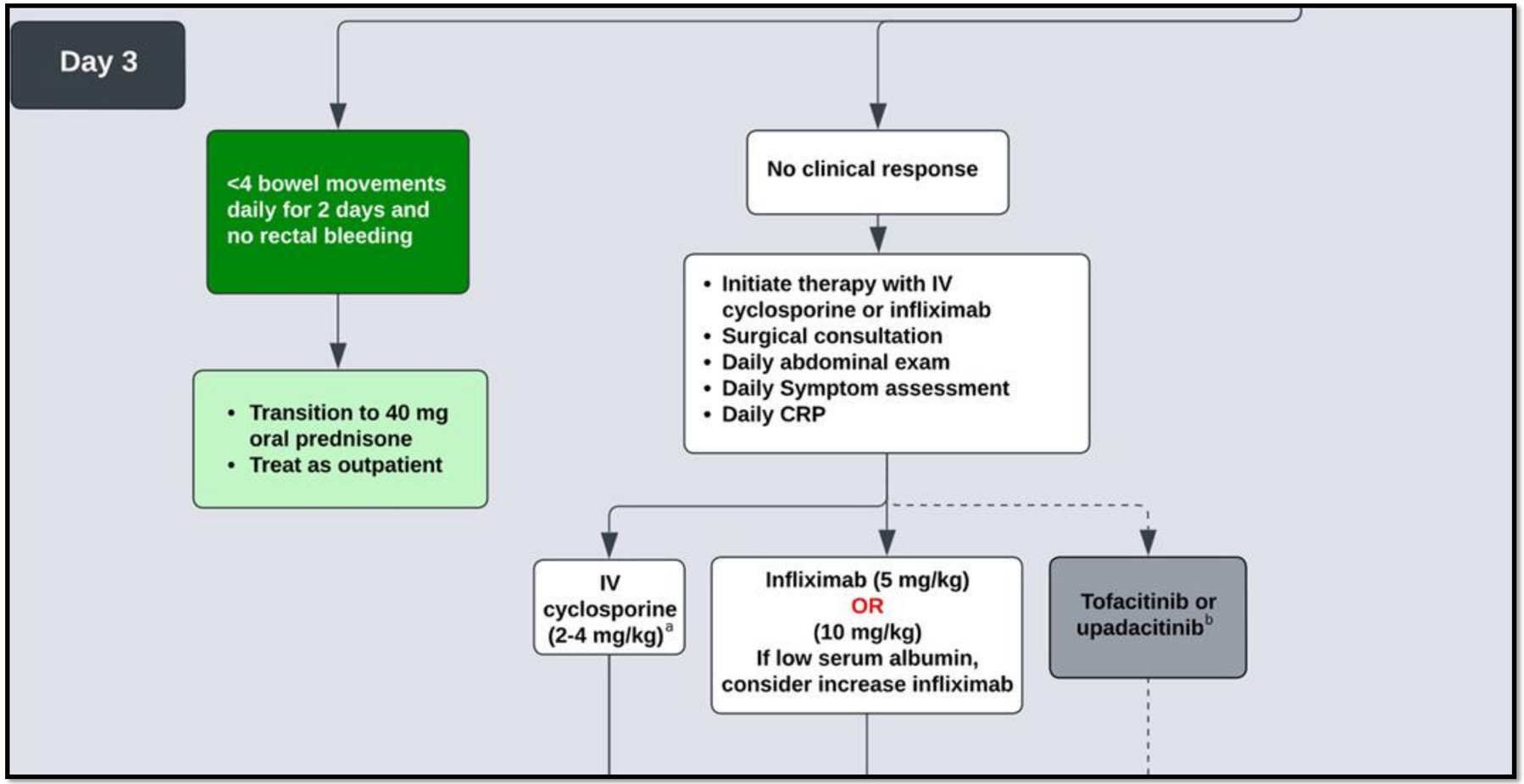


Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0


Severe UC Requiring Hospital Admission
Day 0
BASELINE INVESTIGATIONS
• Stool microbiology including C. difficile
• Assess for toxic megacolon
• Venous thromboembolism prophylaxis
• Endoscopy to rule out CMV colitis (preferrably within 24 hours)
◦ Surgical consultation
• Withold 5-ASA (paradoxical increase in diarrhea)
MODIFIED ASUC CRITERIA
≥6 bowel movements along with ≥1 of:
• Tachycardia
• Fever
• Hemoglobin <10.5 g/dL
• CRP >5 mg/dL
CDI OR CMV POSITIVE
Treat CDI or CMV Colitis
*Do not hold other therapies
CDI AND CMV NEGATIVE
Commence intravenous steroids without delay
CDI
CMV Colitis
Fidaxomicin (200 mg BID 10-14 days) OR Vancomycin (125 mg QID 10-14 days)
Not systemic
Serum positive and diffuse inclusion bodies
Valacyclovir
Ganciclovir
• IV corticosteroid (no more than 60 mg of methylprednisolone per day or hydrocortisone 100 mg 3-4 times per day) for 3-5 days
• Assess symptoms and CRP daily

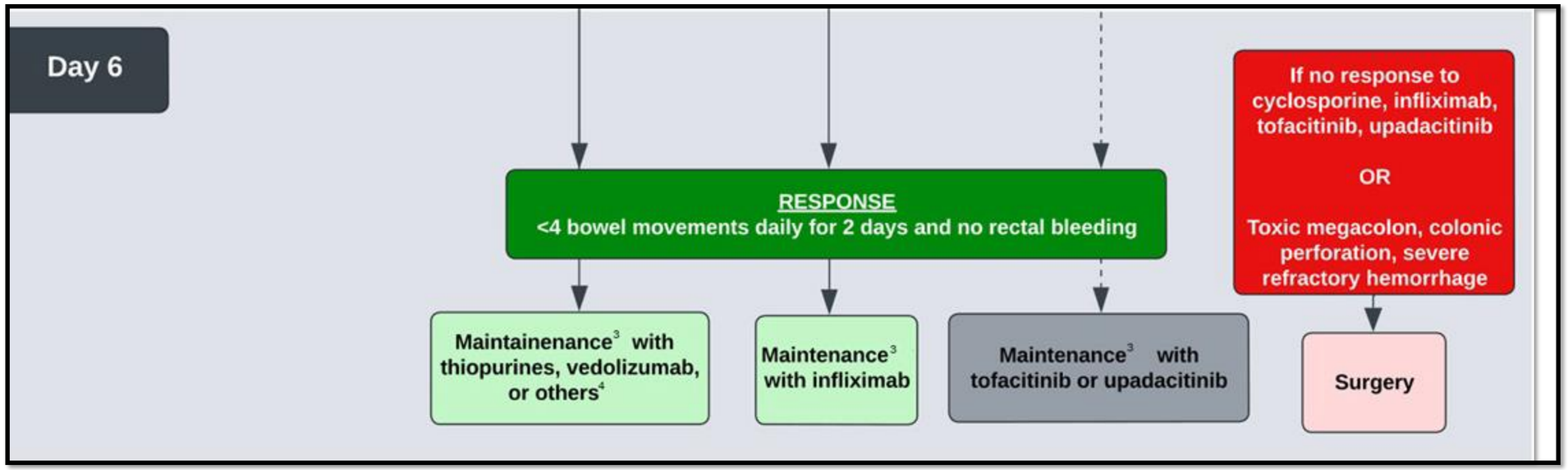
Suggested Management Algorithm for Severe Ulcerative Colitis (UC)

Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0


Day 3
<4 bowel movements daily for 2 days and no rectal bleeding
• Transition to 40 mg oral prednisone
• Treat as outpatient
No clinical response
• Initiate therapy with IV cyclosporine or infliximab
• Surgical consultation
• Daily abdominal exam
• Daily Symptom assessment
• Daily CRP
IV cyclosporine (2-4 mg/kg)[a]
Infliximab (5 mg/kg)
OR
(10 mg/kg)
If low serum albumin, consider increase infliximab
Tofacitinib or upadacitinib[b]

Suggested Management Algorithm for Severe Ulcerative Colitis (UC)

Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0


Day 6
RESPONSE
<4 bowel movements daily for 2 days and no rectal bleeding
If no response to cyclosporine, infliximab, tofacitinib, upadacitinib
OR
Toxic megacolon, colonic perforation, severe refractory hemorrhage
Maintainenance[3] with thiopurines, vedolizumab, or others[4]
Maintenance[3] with infliximab
Maintenance[3] with tofacitinib or upadacitinib
Surgery

Suggested Management Algorithm for Severe Ulcerative Colitis (UC)

Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of the inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853): 1606–1616. doi:10.1016/S0140-6736(12)60150-0

Complications

Local Complications & Management:

Complication	Management Approach
Toxic megacolon	NPO, IV fluids, IV hydrocortisone 100 mg q6h, DVT prophylaxis, surgery if no improvement in 72h
Severe GI bleeding	IV steroids, transfusion, endoscopic eval, colectomy if bleeding is massive
Perforation	Emergency colectomy
Strictures	Colonoscopy + biopsy to exclude malignancy, may need surgical resection
CRC (Colorectal Cancer)	Surveillance colonoscopy every 1–3 years after 8 years of disease; colectomy if high-grade dysplasia

Table.20

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Complications

Systemic Complications & Management:

Complication	Management Approach
PSC	Monitor LFTs, MRCP; screen for CRC & cholangiocarcinoma; liver transplant if advanced
Anemia	Iron studies; treat with oral or IV iron depending on severity
Osteoporosis	Calcium + vitamin D, DEXA scan, consider bisphosphonates if indicated
Malnutrition	Nutritional support, avoid long-term steroids
VTE (Thrombosis)	Prophylactic anticoagulation for all hospitalized UC patients (ACCP recommendation)

Table.21

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Indications for Surgery in UC

Absolute Indications for Colectomy:

1. Toxic megacolon not responding within 3–5 days of IV steroids
2. Perforation
3. Massive, uncontrollable GI bleeding
4. Colorectal cancer or high-grade dysplasia
5. Severe steroid-refractory disease
6. Steroid-dependent or biologic-refractory UC impairing quality of life

CASE	Suggested Timing of Surgery
ASUC (Acute Severe UC) – no response to IV steroids in 3–5 days	Consider colectomy or rescue therapy (e.g., infliximab)
Severe bleeding	If transfusions > 6 units or hemodynamic instability
Perforation	Immediate emergency colectomy
CRC risk	Colectomy for HGD, multifocal LGD, or unmanageable inflammation

Table.22

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Surgery Options in UC

Procedure	Description	Key Features
Proctocolectomy with Ileal Pouch-Anal Anastomosis (IPAA)	Removal of colon and rectum, with creation of a J-pouch from the small intestine, connected to the anus.	- Most common surgery for UC- Allows for near-normal defecation- Requires good sphincter function
Proctocolectomy with End Ileostomy	Removal of colon and rectum, with external stoma (opening) in the abdomen connected to an ostomy bag.	- Permanent ileostomy- No need for pouch formation- Useful in patients not suitable for IPAA
Laparoscopic Surgery	Minimally invasive technique using small incisions and camera assistance. Can be used for IPAA or ileostomy procedures.	- Faster recovery- Less postoperative pain- Better cosmetic results

Table.23

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Summary

1. UC is a chronic, idiopathic inflammatory bowel disease limited to the colon and rectum, characterized by continuous mucosal inflammation.

2. Diagnosis is evidence-based, requiring endoscopy with biopsy, exclusion of infections, and supported by fecal calprotectin and inflammatory markers.

3. Severity is assessed using validated tools such as the Mayo Score, UCEIS, and clinical indices, which guide treatment decisions.

4. Management follows a step-up approach:
- Mild to moderate: 5-ASA ± rectal therapy
- Moderate to severe: Systemic corticosteroids, followed by biologics or small molecules
- Acute severe UC (ASUC): Hospitalization + IV steroids → rescue therapy → surgery if refractory

5. The ultimate goal is clinical and endoscopic remission, minimizing steroid exposure, and maintaining long-term quality of life.

6. Extraintestinal manifestations such as arthritis, uveitis, and PSC are common and require multidisciplinary care.

7. Complications & management and surgery indications

References

1. Rubin DT, Ananthakrishnan AN, Siegel CA, Sauer BG, Long MD. ACG Clinical Guideline: Ulcerative Colitis in Adults. Am J Gastroenterol. 2025;120(6):1187–1224. doi:10.14309/ajg.0000000000003463

2. ACCP Updates in Therapeutics® 2024: Pharmacotherapy Preparatory Review and Recertification Course.

3. Mosli MH, Saadah OI, Al-Saadi MM, et al. Incidence, prevalence, and clinical characteristics of IBD in Saudi Arabia: A single-center experience. Saudi J Gastroenterol. 2020;26(3):129–135.

4. Alharbi OR, Azzam NA, Almalki AS, et al. Epidemiology of inflammatory bowel disease in the Qassim region of Saudi Arabia. Saudi Med J. 2014;35(9):913–918.

5. Molodecky NA, Soon IS, Rabi DM, et al. Increasing incidence and prevalence of inflammatory bowel diseases with time, based on systematic review. Lancet. 2012;380(9853):1606–1616. doi:10.1016/S0140-6736(12)60150-0

Take Home message

When we optimize therapy, reduce flares, and minimize side effects
we’re not just following guidelines… we’re giving patients their lives back

Thank You

Any Questions?